



Former GM Linden NSD 002 186 690

May 25, 2010  
Mr. Gary Greulich  
New Jersey Department of Environmental Protection  
Northern Regional Office  
7 Ridgedale Avenue  
Cedar Knolls, NJ 07927

RE: Remedial Action Progress Report No. 3 for the Retail Redevelopment Area Portion of the Former General Motors Linden Assembly Plant, 1016 West Edgar Road, Linden, Union County, New Jersey 07036; DUK059.701.0002.

Dear Mr. Greulich:

On May 26, 2009, the New Jersey Department of Environmental Protection (NJDEP) approved the New Jersey Remedial Action Workplan and RCRA Corrective Measures Proposal Addendum No. 1 (RAWP) for the Retail Redevelopment Area of the Former GM Linden Assembly Plant (Site; SRP PI# 014755; EA ID# SUB090001; BFO File Number: 20-09-24). The May 26, 2009 approval letter requested a Remedial Action Progress Report for the Retail Redevelopment Area on/by November 30, 2009. Subsequent reports will be submitted on a quarterly basis.

This letter constitutes Remedial Action Progress Report No. 3 for the Retail Redevelopment Area. Hull & Associates, Inc. (Hull) has prepared this report on behalf of Linden Development LLC (Linden Development) to summarize remedial activities completed on the Site between February 23 and May 31, 2010.

Requirements, according to N.J.A.C. 7:26E-6.6, are shown below in ***bold italics***, with Hull/Linden Development's update following. The report certification required by N.J.A.C. 7:26E-1.5 is included in Attachment A.

- 1. NJDEP requires a description of each planned remedial action***
  - i. scheduled to be initiated or completed within the reporting period***
  - ii. actually initiated or completed during the reporting period; and***
  - iii. scheduled but not initiated or not completed during the reporting period, including the reasons for the noncompliance with the approved schedule.***

#### Soil

As outlined in the approved RAWP, the remedial activities for soils on the Retail Redevelopment Area include consist of the following:

- a. Establishing deed restrictions or environmental covenants to maintain commercial/industrial land use at the Site;
- b. Regrading the site to achieve the grade necessary to support the proposed redevelopment;



- c. Constructing building slabs, parking areas and roadways and placing one foot of clean soil over geotextile fabric in future greenspaces to preclude direct contact exposures to future receptor populations and/or provide cover to historical fill material; and
- d. Surveying to demonstrate that all areas are covered with engineering controls (e.g., building slabs, parking areas and roadways) or one foot of clean soil.

These remedial activities are directly related to construction activities associated with the future redevelopment at the Site which are dependent upon finalization of agreements with end users. Linden Development has been working throughout the reporting period to finalize agreements with several end users that will ultimately occupy various portions of the Site. Given that end user agreements have not been finalized, the construction activities described in the RAWP have not yet been initiated.

During the reporting period, Linden Development imported structural fill materials from off-site sources for use during the redevelopment consistent with the RAWP and the Revised Soil and Concrete Reuse Proposal (Revision 1.0) approved by NJDEP. Materials imported prior to and during the reporting period are summarized in Table 1.

#### Groundwater

As outlined in the approved RAWP, remedial actions related to groundwater underlying the Retail Redevelopment Area do not appear to be necessary. However, sporadic historical concentrations of lead in limited monitoring wells have exceeded groundwater quality criteria at the Site, as observed in previous groundwater sampling data. As a result, the NJDEP may consider that an indeterminate Classification Exception Area (CEA) is necessary due to these sporadic exceedances and the presence of historical fill at the Site.

Based on discussions with the NJDEP Case Manager on November 18, 2009, a final determination has not been made on the necessity of an indeterminate CEA. However, if ultimately required, the indeterminate CEA will be established by the Case Manager as part of finalizing the Site NFA and will include the overburden aquifer within the Site boundaries. As discussed on November 18, 2009, the Case Manager currently maintains the information necessary to establish the indeterminate CEA (if ultimately deemed necessary) and no additional submittals by Linden Development are required.

#### Storm Sewer (AOI-18)

Remedial activities associated with AOI-18 are complete, as documented in Remedial Action Progress Report No. 1 (November 2009).

#### **2. NJDEP requires discussion of problems and delays in the implementation of the RAWP, which should include proposals for corrections.**

As discussed above, remedial activities are directly related to construction activities associated with the future redevelopment at the Site which are dependent upon finalization of agreements with end users. Given current economic conditions, the construction activities described in the RAWP will not be implemented until redevelopment deals with end users are finalized.

Linden Development is continuing to pursue finalization of agreements with several end users for the Retail Redevelopment Area. In the interim, conditions at the Site are stable given that GM's original cover types (asphalt, building pads, etc.) remain intact.

**3. NJDEP requires proposals for a deviation from, or modification to, the approved RAWP.**

No deviations from, or modifications to, the approved RAWP are planned or required at this time.

**4. NJDEP requires submittal of a revised schedule pursuant to N.J.A.C. 7:26E-6.5, to reflect the changes as noted in 1 through 3 above.**

As noted above, finalization of agreements with end users is the driving force behind the redevelopment of the Site and implementation of the RAWP. Linden Development currently anticipates finalizing agreements with selected end users in the near future such that redevelopment activities will commence on the Site during the summer/fall of 2010. An updated timeline for RAWP implementation will be included in the next progress report, scheduled to be submitted on or before August 31, 2010.

**5. NJDEP requires an updated status of all permit applications relative to the critical path schedule.**

The permits required for initiation of the remedial activities are summarized below.

| Permit/Approval Type       | Status           | Notes   |
|----------------------------|------------------|---|
| Planning Board Approval    | Approved 1/9/09  | Site plan approved by City of Linden Planning Board |
| NPDES Permit (Storm Water) | Approved 9/16/09 | NPDES Permit No. 0088323                            |
| Soil Conservation District | Approved 9/16/09 | Approved by Somerset-Union Conservation District    |

**6. NJDEP requires a listing of each remedial action to be performed during the next reporting period.**

No remedial activities are scheduled to be performed during the next reporting period. As noted above, finalization of agreements with end users is the driving force behind the redevelopment of the Site and implementation of the RAWP. Linden Development currently anticipates finalizing agreements with selected end users in the near future such that redevelopment activities will commence on the Site during the summer/fall of 2010. An updated timeline for RAWP implementation will be included in the next progress report, scheduled to be submitted on or before August 31, 2010.

**7. NJDEP requires costs of each remedial action**

- i. Annual summary of all remedial action costs incurred to date; and
- ii. Revised cost estimate for remedial actions remaining to be performed.

Given that significant construction and remedial implementation has not yet commenced, no remedial costs have been accrued, with the exception of minor costs for the storm sewer cleaning (i.e., approximately \$7,000) reported in Remedial Action Progress Report No. 1.

The cost estimate for completing remedial activities remains consistent with that presented in the RAWP (i.e., approximately \$7,500,000 for earthwork and construction of engineering controls).

**8. NJDEP requires a tabulation of sampling results (according to N.J.A.C. 7:26E-3.13(c)3) received during the reporting period and a summary of the data and any conclusions, presented in a format consistent with N.J.A.C. 7:26E-4.8.**

During the reporting period, Linden Development imported structural fill materials from off-site sources for use during the redevelopment consistent with the RAWP and the Revised Soil and Concrete Reuse Proposal (Revision 1.0) approved by NJDEP. Soil analytical results associated with the materials imported during this reporting period are tabulated in Attachment B.

**9. NJDEP requires a summary of active groundwater remedial actions**

- i. *groundwater elevation maps with groundwater flow shown immediately before and during active groundwater remediation;*
- ii. *graphs depicting changes in concentrations over time for all impacted wells as well as all down-gradient wells;*
- iii. *summary of volume of water treated since last reporting period and the total volume treated since active remedial action commenced; and*
- iv. *Summary of groundwater contamination, indicating either that contamination remains above applicable standards (include a proposal detailing additional remedial actions) or that concentrations are below applicable standards.*

As outlined in the approved RAWP, remedial actions related to groundwater underlying the Retail Redevelopment Area do not appear to be necessary (see discussion under item 1).

**10. NJDEP requires a summary of natural remediation groundwater remedial actions**

- i. *Summary table of the groundwater monitoring results collected; and*
- ii. *Conclusions whether data indicate that natural remediation is no longer appropriate (must then also submit a revised RAWP)*

As outlined in the approved RAWP, remedial actions related to groundwater underlying the Retail Redevelopment Area do not appear to be necessary (see discussion under item 1).

**11. NJDEP requires a description of all wastes generated as a result of the remedial action**

- i. *Tabulation of waste characterization samples collected, including the physical state of the material, volume, number of samples, analyses performed and results;*
- ii. *Listing of types and quantities of waste generated by the remedial action during the reporting period as well as to date;*
- iii. *Name of the disposal facility used;*

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- iv. Transporters' dates of disposal; and**
- v. Manifest numbers of each waste shipment.**

No wastes were generated during the reporting period.

**12. NJDEP requires that any additional support documentation that is available also be provided (photos, etc.).**

Given that the majority of the remedial activities have not yet been implemented, no additional support documentation is available.

The next scheduled remedial action progress report will include remedial actions completed between May 31, 2010 and August 31, 2010. Please feel free to contact Bill Dennis at (412) 828-4988 with any questions regarding the update provided herein.

Sincerely,

A handwritten signature in black ink, appearing to read "WHD Dennis III".

Bill Dennis  
Senior Project Manager

Attachments

ct: David Green – Linden Development, LLC  
Clifford Ng – U.S. EPA Region 2

## **TABLES**

**LINDEN DEVELOPMENT LLC SITE (FORMER GM LINDEN ASSEMBLY PLANT)**  
**1016 WEST EDGAR ROAD, LINDEN, NJ**  
**QUARTERLY REPORT NO. 3 - RETAIL REDEVELOPMENT AREA**

**TABLE 1**  
**SUMMARY OF FILL MATERIALS IMPORTED AS OF MAY 2010**

| <b>Import Date</b>   | <b>Source</b>  | <b>Supplier</b>                  | <b>Quantity</b>  | <b>Material Type</b>   | <b>Anticipated Site Use</b>                           |
|--|--|----------------------------------|------------------|------------------------|---|
| <b>Soils and Crushed Concrete - Imported Prior to Current Reporting Period</b> |  |                                  |                  |                        |   |
| Pre-February 2010  | City of Rahway, NJ - Former firing range soil stockpile  | City of Rahway, NJ               | 800 cy           | Soils                  | Structural fill to be covered by engineering controls |
| Pre-February 2010  | City of Linden, NJ - 2300 S. Wood Street - soil stockpile from City's Parks Dept.                          | City of Linden, NJ               | 2,865 cy         | Soils                  | Structural fill to be covered by engineering controls |
|  |  | <b>Subtotal:</b>                 | <b>3,665 cy</b>  |                        |   |
| <b>Soils and Crushed Concrete - Imported During Current Reporting Period</b>   |  |                                  |                  |                        |   |
| April / May 2010   | New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project | Pure Earth, Inc.                 | 2,973 cy         | Soils                  | Structural fill to be covered by engineering controls |
| April / May 2010   | Newark Public Schools Stadium - excess soils from construction project                                     | AWT Environmental Services, Inc. | 3,397 cy         | Soils                  | Structural fill to be covered by engineering controls |
| May 2010   | Newark Brick Tower - Residential Tower Demolition - processed backfill material                            | DEMREX and Altchem Environmental | 15,680 cy        | Soils/Crushed Concrete | Structural fill to be covered by engineering controls |
|  |  | <b>Subtotal:</b>                 | <b>22,050 cy</b> |                        |   |
|  | <b>Total for Soils and Crushed Concrete Imported to Date:</b>  |                                  | <b>25,715 cy</b> |                        |   |
| <b>Asphalt Millings - Imported Prior to Current Reporting Period</b>           |  |                                  |                  |                        |   |
| Pre-February 2010  | City of Linden, NJ - Residential Streets - asphalt millings  | City of Linden, NJ               | 1,274 cy         | Asphalt Millings       | Subgrade material for future paved areas              |
|  |  | <b>Subtotal:</b>                 | <b>1,274 cy</b>  |                        |   |
| <b>Asphalt Millings - Imported During Current Reporting Period</b>             |  |                                  |                  |                        |   |
| April 2010   | City of Linden, NJ - Residential Streets - asphalt millings  | City of Linden, NJ               | 160 cy           | Asphalt Millings       | Subgrade material for future paved areas              |
|  |  | <b>Subtotal:</b>                 | <b>160 cy</b>    |                        |   |
|  | <b>Total for Asphalt Millings Imported to Date:</b>  |                                  | <b>1,434 cy</b>  |                        |   |

**ATTACHMENT A**  
**Report Certification**

**Certification**

**Linden Development, LLC  
ISRA Case Number E20040531**

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13.

Date: 5/24/2010

Linden Development, LLC  
By:

  
William J. DeBoer  
William J. DeBoer, Executive V.P.

Sworn to and subscribed to before  
me on this 24th day  
of May, 2010

Deena E. Griest  
Notary



Deena E. Griest  
Notary Public-State of Ohio  
My Commission Expires  
May 29, 2012

**ATTACHMENT B**

**Analytical Results for Samples of Fill Material  
Imported During this Reporting Period**

**New 121st Police Precinct - 970 Sanders Street, Staten Island, NY**  
**Excess Soils from Construction Project**  
**Table B-1 - Summary of Analytical Results (Detected Analytes Only)**

| Analyte                    | Units | Sample ID   | TP-1C      | TP-1G (4)  | TP-2C      | TP-2G (4)  | TP-3C      | TP-3G (4.5) | TP-4C      | TP-4G (4.5) | TP-6C      | TP-6G (4.5) | TP-5C      | TP-5G (5)  | TP-7C      | TP-7G (4.5) | TP-8C      | TP-8G (4)  |    |      |     |    |      |     |    |    |
|----------------------------|-------|-------------|------------|------------|------------|------------|------------|-------------|------------|-------------|------------|-------------|------------|------------|------------|-------------|------------|------------|----|------|-----|----|------|-----|----|----|
|                            |       | Sample Date | 12/23/2009 | 12/23/2009 | 12/23/2009 | 12/23/2009 | 12/23/2009 | 12/23/2009  | 12/23/2009 | 12/23/2009  | 12/23/2009 | 12/24/2009  | 12/24/2009 | 12/24/2009 | 12/24/2009 | 12/24/2009  | 12/24/2009 | 12/24/2009 |    |      |     |    |      |     |    |    |
|                            |       | CasNo       | Q          | Q          | Q          | Q          | Q          | Q           | Q          | Q           | Q          | Q           | Q          | Q          | Q          | Q           | Q          | Q          |    |      |     |    |      |     |    |    |
| <b>VOCs</b>                |       |             |            |            |            |            |            |             |            |             |            |             |            |            |            |             |            |            |    |      |     |    |      |     |    |    |
| Acetone                    | PPB   | 67-64-1     | NT         | 95         | C          | NT         | 5.8        | U           | NT         | 5.5         | U          | NT          | 5.6        | U          | NT         | 5.9         | U          | NT         |    |      |     |    |      |     |    |    |
| Methylene chloride         | PPB   | 75-09-2     | NT         | 37         | B          | NT         | 29         | B           | NT         | 22          | B          | NT          | 21         | B          | NT         | 38          | B          | NT         |    |      |     |    |      |     |    |    |
| <b>SVOCs</b>               |       |             |            |            |            |            |            |             |            |             |            |             |            |            |            |             |            |            |    |      |     |    |      |     |    |    |
| 2-Methylnaphthalene        | PPB   | 91-57-6     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 130        | U  | NT   |     |    |      |     |    |    |
| Acenaphthene               | PPB   | 83-32-9     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 130        | U  | NT   |     |    |      |     |    |    |
| Acenaphthylene             | PPB   | 208-96-8    | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 130        | U  | NT   |     |    |      |     |    |    |
| Anthracene                 | PPB   | 120-12-7    | 130        | U          | NT         | 50         | J          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 130        | U  | NT   |     |    |      |     |    |    |
| Benzo(a)anthracene         | PPB   | 56-55-3     | 18         | J          | NT         | 350        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 890        | NT | 130  | U   | NT |      |     |    |    |
| Benzo(a)pyrene             | PPB   | 50-32-8     | 19         | J          | NT         | 280        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 810        | NT | 130  | U   | NT |      |     |    |    |
| Benzo(b)fluoranthene       | PPB   | 205-99-2    | 130        | U          | NT         | 410        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 1100       | NT | 130  | U   | NT |      |     |    |    |
| Benzo(g,h,i)perylene       | PPB   | 191-24-2    | 130        | U          | NT         | 250        | J          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 540        | NT | 130  | U   | NT |      |     |    |    |
| Benzo(k)fluoranthene       | PPB   | 207-08-9    | 130        | U          | NT         | 110        | J          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 430        | NT | 130  | U   | NT |      |     |    |    |
| Bis(2-ethylhexyl)phthalate | PPB   | 117-81-7    | 130        | U          | NT         | 120        | J          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 120        | U  | NT   | 29  | J  | NT   |     |    |    |
| Butyl benzyl phthalate     | PPB   | 85-68-7     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 120        | U  | NT   | 98  | J  | NT   |     |    |    |
| Carbazole                  | PPB   | 86-74-8     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 220        | NT | 130  | U   | NT |      |     |    |    |
| Chrysene                   | PPB   | 218-01-9    | 130        | U          | NT         | 280        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 830        | NT | 130  | U   | NT |      |     |    |    |
| Dibenzo(a,h)anthracene     | PPB   | 53-70-3     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 160        | NT | 130  | U   | NT |      |     |    |    |
| Diethyl phthalate          | PPB   | 84-66-2     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 120        | U  | NT   | 28  | J  | NT   |     |    |    |
| Di-n-butyl phthalate       | PPB   | 84-74-2     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 120        | U  | NT   | 24  | J  | NT   |     |    |    |
| Fluoranthene               | PPB   | 206-44-0    | 130        | U          | NT         | 500        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 2400       | NT | 130  | U   | NT |      |     |    |    |
| Fluorene                   | PPB   | 86-73-7     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 480        | NT | 130  | U   | NT |      |     |    |    |
| Indeno(1,2,3-c,d)pyrene    | PPB   | 193-39-5    | 130        | U          | NT         | 260        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 670        | NT | 130  | U   | NT |      |     |    |    |
| Naphthalene                | PPB   | 91-20-3     | 130        | U          | NT         | 260        | U          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 210        | NT | 43   | J   | NT |      |     |    |    |
| Phenanthrene               | PPB   | 85-01-8     | 130        | U          | NT         | 190        | J          | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 1900       | NT | 130  | U   | NT |      |     |    |    |
| Pyrene                     | PPB   | 129-00-0    | 23         | J          | NT         | 450        |            | NT          | 270        | U           | NT         | 130         | U          | NT         | 130        | U           | NT         | 1500       | NT | 130  | U   | NT |      |     |    |    |
| <b>Pesticides</b>          |       |             |            |            |            |            |            |             |            |             |            |             |            |            |            |             |            |            |    |      |     |    |      |     |    |    |
| 4,4'-DDD                   | PPB   | 72-54-8     | 3          |            | NT         | 5.2        |            | NT          | 2.2        | J           |            | 14          |            | NT         | 2.2        | U           | NT         | 30         | NT | 1.9  | J   | NT | 5.9  | NT  |    |    |
| 4,4'-DDE                   | PPB   | 72-55-9     | 2.1        | U          | NT         | 1.7        | J          | NT          | 2.3        | U           |            | 2.5         |            | NT         | 2.2        | U           | NT         | 4.3        | NT | 2.2  | U   | NT | 2.2  | U   | NT |    |
| 4,4'-DDT                   | PPB   | 50-29-3     | 2.1        | U          | NT         | 2.1        | U          | NT          | 2.3        | U           |            | 6.1         |            | NT         | 2.2        | U           | NT         | 2.1        | U  | NT   | 2.2 | U  | NT   | 2.2 | U  | NT |
| alpha-Chlordane            | PPB   | 5103-71-9   | 2.1        | U          | NT         | 4.4        |            | NT          | 2.3        | U           | NT         | 2.2         |            | NT         | 2.2        | U           | NT         | 2.1        | U  | NT   | 2.2 | U  | NT   | 2.2 | U  | NT |
| gamma-Chlordane            | PPB   | 5103-74-2   | 2.1        | U          | NT         | 0.89       | J          | NT          | 2.3        | U           | NT         | 2.2         |            | NT         | 2.2        | U           | NT         | 2.1        | U  | NT   | 2.2 | U  | NT   | 2.2 | U  | NT |
| <b>Metals</b>              |       |             |            |            |            |            |            |             |            |             |            |             |            |            |            |             |            |            |    |      |     |    |      |     |    |    |
| Aluminum                   | PPM   | 7429-90-5   | 6840       |            | NT         | 5710       |            | NT          | 5560       |             | NT         | 5490        |            | NT         | 5900       |             | NT         | 4830       | NT | 6390 |     | NT | 4610 | NT  |    |    |
| Arsenic                    | PPM   | 7440-38-2   | 3.93       |            | NT         | 3.27       |            | NT          | 3.62       |             | NT         | 2.63        |            | NT         | 2.29       |             | NT         | 3.54       | NT | 3.93 |     | NT | 2.35 | NT  |    |    |
| Barium                     | PPM   | 7440-39-3   | 40.5       |            | NT         | 31.3       |            | NT          | 31.2       |             | NT         | 23.9        |            | NT         | 25.2       |             | NT         | 20.4       | NT | 34.4 |     | NT | 21.9 | NT  |    |    |
| Calcium                    | PPM   | 7440-70-2   | 5710       |            | NT         | 19000      |            | NT          | 3020       |             | NT         | 1200        |            | NT         | 5670       |             | NT         | 5230       | NT | 4590 |     | NT | 247  | NT  |    |    |
| Chromium                   |       |             |            |            |            |            |            |             |            |             |            |             |            |            |            |             |            |            |    |      |     |    |      |     |    |    |

**121st Police Precinct - 970 Sanders Street, Staten Island, NY**  
**Excess Soils from Construction Project**  
**B-1 - Summary of Analytical Results (Detected Analytes Only)**

## Notes:

C - Calibration %RSD/%D exceeded for non-COC analytes

H - Holding times for preparation or analysis exceeded

NT - Not tested

U - Indicates that the compound was analyzed but not detected

B - Analyte detected in the associated in the m

J - Analyte detected below quantitation limits

**Newark Public Schools Stadium  
Excess Soils from Construction Project**

**Table B-2 - Summary of Analytical Results (Detected Analytes Only)**

#### Notes:

NT - Not tested

U - Indicates that the compound was analyzed but not detected

B - Analyte detected in the associated in the method blank

J - Analyte detected below quantitation limits

ND - Not detected

**Newark Public Schools Stadium  
Excess Soils from Construction Project**

**Table B-2 - Summary of Analytical Results (Detected Analytes Only)**

| Parameter                  | Units   | CAS Registry | COMP_1 | Q | COMP_11DL | Q | COMP_12 | Q | COMP_12DL | Q | COMP_13 | Q | COMP_14 | Q | COMP_14DL | Q | COMP_5-10 | Q | COMP_11-14 | Q | COMP_15 | Q |  |  |  |  |
|----------------------------|---------|--------------|--------|---|-----------|---|---------|---|-----------|---|---------|---|---------|---|-----------|---|-----------|---|------------|---|---------|---|--|--|--|--|
| <b>VOCs</b>                |         |              |        |   |           |   |         |   |           |   |         |   |         |   |           |   |           |   |            |   |         |   |  |  |  |  |
| Methylene Chloride         | PPM     | 75-09-2      | 0.020  | B | NT        |   | 0.011   | B | NT        |   | 0.017   | B | 0.025   | B | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| <b>SVOCs</b>               |         |              |        |   |           |   |         |   |           |   |         |   |         |   |           |   |           |   |            |   |         |   |  |  |  |  |
| 2-Methylnaphthalene        | PPM     | 91-57-6      | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Acenaphthene               | PPM     | 83-32-9      | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Acenaphthylene             | PPM     | 208-96-8     | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Anthracene                 | PPM     | 120-12-7     | ND     | U | NT        |   | ND      | U | NT        |   | 0.048   | J | 0.19    | J | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Benzo[a]anthracene         | PPM     | 56-55-3      | 0.20   |   | NT        |   | 0.13    | J | NT        |   | 0.21    | J | 0.52    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Benzo[a]pyrene             | PPM     | 50-32-8      | 0.21   |   | NT        |   | 0.13    | J | NT        |   | 0.22    |   | 0.41    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Benzo[b]fluoranthene       | PPM     | 205-99-2     | 0.24   |   | NT        |   | 0.13    | J | NT        |   | 0.24    |   | 0.43    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Benzo[g,h,i]perylene       | PPM     | 191-24-2     | 0.082  | J | NT        |   | 0.043   | J | NT        |   | 0.073   | J | 0.23    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Benzo[k]fluoranthene       | PPM     | 207-08-9     | 0.19   | J | NT        |   | 0.14    | J | NT        |   | 0.21    | J | 0.38    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| bis(2-Ethylhexyl)phthalate | PPM     | 117-81-7     | 0.090  | J | NT        |   | 0.10    | J | NT        |   | 0.061   | J | 0.056   | J | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Chrysene                   | PPM     | 218-01-9     | 0.24   |   | NT        |   | 0.16    | J | NT        |   | 0.24    |   | 0.59    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Dibenz[a,h]anthracene      | PPM     | 53-70-3      | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | 0.10    | J | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Dibenzofuran               | PPM     | 132-64-9     | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | 0.047   | J | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Fluoranthene               | PPM     | 206-44-0     | 0.38   |   | NT        |   | 0.26    |   | NT        |   | 0.45    |   | 1.4     |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Fluorene                   | PPM     | 86-73-7      | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | 0.11    | J | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Indeno[1,2,3-cd]pyrene     | PPM     | 193-39-5     | 0.080  | J | NT        |   | 0.044   | J | NT        |   | 0.076   | J | 0.22    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Naphthalene                | PPM     | 91-20-3      | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Phenanthrene               | PPM     | 85-01-8      | 0.15   | J | NT        |   | 0.16    | J | NT        |   | 0.23    |   | 1.1     |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Pyrene                     | PPM     | 129-00-0     | 0.41   |   | NT        |   | 0.28    |   | NT        |   | 0.45    |   | 1.1     |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Solids, Percent            | Percent | UNK-000010   | 83.5   |   | NT        |   | 83      |   | NT        |   | 77.7    |   | 80.9    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| <b>Inorganics</b>          |         |              |        |   |           |   |         |   |           |   |         |   |         |   |           |   |           |   |            |   |         |   |  |  |  |  |
| Antimony                   | PPM     | 7440-36-0    | 1.8    |   | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Arsenic                    | PPM     | 7440-38-2    | 31.6   |   | NT        |   | 60.9    |   | NT        |   | 13.3    |   | 46.7    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Beryllium                  | PPM     | 7440-41-7    | 0.695  |   | NT        |   | 0.699   |   | NT        |   | 0.727   |   | 0.661   |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Cadmium                    | PPM     | 7440-43-9    | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | 0.445   |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Chromium                   | PPM     | 7440-47-3    | 11.9   |   | NT        |   | 11.0    |   | NT        |   | 13.4    |   | 10.8    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Copper                     | PPM     | 7440-50-8    | 48.7   |   | NT        |   | 21.0    |   | NT        |   | 45.6    |   | 42.5    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Lead                       | PPM     | 7439-92-1    | 162    |   | NT        |   | 127     |   | NT        |   | 137     |   | 300     |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Nickel                     | PPM     | 7440-02-0    | 10.9   |   | NT        |   | 10.1    |   | NT        |   | 12.5    |   | 9.21    |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Selenium                   | PPM     | 7782-49-2    | 1.21   |   | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Silver                     | PPM     | 7440-22-4    | ND     | U | NT        |   | ND      | U | NT        |   | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Zinc                       | PPM     | 7440-66-6    | 148    |   | NT        |   | 105     |   | NT        |   | 155     |   | 187     |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Mercury                    | PPM     | 7439-97-6    | 0.313  |   | NT        |   | ND      | U | NT        |   | 0.717   |   | 0.634   |   | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| <b>Herbicides</b>          |         |              |        |   |           |   |         |   |           |   |         |   |         |   |           |   |           |   |            |   |         |   |  |  |  |  |
| 4,4'-DDD                   | PPM     | 72-54-8      | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | NT        |   | NT        |   | NT         |   | NT      |   |  |  |  |  |
| 4,4'-DDE                   | PPM     | 72-55-9      | 0.182  | E | 0.258     | D | 0.189   | E | 0.245     | D | 0.0569  |   | 0.049   |   | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| 4,4'-DDT                   | PPM     | 50-29-3      | 0.0812 | E | 0.0862    | D | 0.0731  | E | 0.0711    | D | 0.0226  |   | 0.0828  | E | 0.0895    | D | NT        |   | NT         |   | NT      |   |  |  |  |  |
| <b>Pesticides</b>          |         |              |        |   |           |   |         |   |           |   |         |   |         |   |           |   |           |   |            |   |         |   |  |  |  |  |
| alpha-BHC                  | PPM     | 319-84-6     | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| beta-BHC                   | PPM     | 319-85-7     | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| delta-BHC                  | PPM     | 319-86-8     | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Dieldrin                   | PPM     | 60-57-1      | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Endosulfan II              | PPM     | 33213-65-9   | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Endrin ketone              | PPM     | 53494-70-5   | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| gamma-BHC (Lindane)        | PPM     | 58-89-9      | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| Heptachlor epoxide         | PPM     | 1024-57-3    | ND     | U | ND        | U | ND      | U | ND        | U | ND      | U | ND      | U | ND        | U | NT        |   | NT         |   | NT      |   |  |  |  |  |
| <b>Wet chemistry</b>       |         |              |        |   |           |   |         |   |           |   |         |   |         |   |           |   |           |   |            |   |         |   |  |  |  |  |
| TCLP-Barium                | PPM     | 7440-39-3    | NT     |   | NT        |   | NT      |   | NT        |   | NT      |   | NT      |   | NT        |   | 0.87      |   | 0.95       |   | 0.84    |   |  |  |  |  |
| TCLP-Lead                  | PPM     | 7439-92-1    | NT     |   | NT        |   | NT      |   | NT        |   | NT      |   | NT      |   | NT        |   | ND        | U | ND         | U | 0.383   |   |  |  |  |  |

## Notes:

NT - Not tested

U - Indicates that the compound was analyzed but not detected

B - Analyte detected in the associated in the method blank

J - Analyte detected

ND - Not detected

**Newark Brick Tower - Residential Tower Demolition**  
**Processed Backfill Material**

**Table B-3 - Summary of Analytical Results for PCBs and PAHs**

| Sample ID<br>Sampling Date<br>Sample Type | Site Specific Acceptance Criteria | P1-S1<br>3/16/2010 Composite | P1-S2<br>3/16/2010 Composite | P1-S3<br>3/16/2010 Composite | P1-S4<br>3/16/2010 Composite | P1-S5<br>3/16/2010 Composite | P1-S6<br>3/16/2010 Composite | P1-S7<br>3/16/2010 Composite | P1-S8<br>3/16/2010 Composite | P1-S9<br>3/16/2010 Composite | P1-S10<br>3/16/2010 Composite | P1-S11<br>3/16/2010 Composite | P1-S12<br>3/16/2010 Composite | P1-S13<br>3/16/2010 Composite | P1-S14<br>3/16/2010 Composite | P1-S15<br>3/16/2010 Composite | P1-S16<br>3/16/2010 Composite |
|---|-----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>PCBs (ppm)</b>                         |                                   |                              |                              |                              |                              |                              |                              |                              |                              |                              |                               |                               |                               |                               |                               |                               |                               |
| Aroclor (Total)                           | 2                                 | ND                           | ND                           | 0.064                        | ND                           | ND                           | ND                           | ND                           | ND                           | 0.037                        | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1016                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1221                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1232                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1242                              | 2                                 | ND                           | ND                           | 0.064                        | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1248                              | 2                                 | ND                           | 0.037                        | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1254                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1260                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1262                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Aroclor-1268                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| <b>PAHs (ppm)</b>                         |                                   |                              |                              |                              |                              |                              |                              |                              |                              |                              |                               |                               |                               |                               |                               |                               |                               |
| Acenaphthene                              | 100                               | ND                           | ND                           | ND                           | ND                           | 0.084                        | ND                           | ND                           | ND                           | ND                           | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Acenaphthylene                            | 8.6                               | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Anthracene                                | 100                               | 0.11                         | 0.08                         | 0.11                         | 0.087                        | 0.24                         | ND                           | 0.41                         | ND                           | 0.09                         | 0.084                         | ND                            | 0.1                           | ND                            | 0.13                          | 0.15                          |                               |
| Benzo[a]anthracene                        | 120                               | 0.28                         | 0.21                         | 0.35                         | 0.23                         | 0.76                         | 0.23                         | 1.2                          | 0.22                         | 0.31                         | 0.29                          | 0.26                          | 0.37                          | 0.58                          | 0.4                           | 0.51                          |                               |
| Benzo[a]pyrene                            | 71                                | 0.24                         | 0.18                         | 0.33                         | 0.2                          | 0.66                         | 0.21                         | 1                            | 0.2                          | 0.27                         | 0.26                          | 0.23                          | 0.33                          | 0.53                          | 0.35                          | 0.46                          |                               |
| Benzo[b]fluoranthene                      | 50                                | 0.35                         | 0.25                         | 0.43                         | 0.27                         | 0.92                         | 0.28                         | 1.3                          | 0.26                         | 0.37                         | 0.35                          | 0.31                          | 0.42                          | 0.7                           | 0.45                          | 0.65                          |                               |
| Benzo[g,h,i]perylene                      | 40                                | 0.15                         | 0.13                         | 0.22                         | 0.14                         | 0.42                         | 0.14                         | 0.61                         | 0.12                         | 0.18                         | 0.16                          | 0.14                          | 0.21                          | 0.35                          | 0.24                          | 0.31                          |                               |
| Benzo[k]fluoranthene                      | 86                                | 0.11                         | 0.097                        | 0.17                         | 0.097                        | 0.26                         | 0.1                          | 0.52                         | 0.1                          | 0.15                         | 0.14                          | 0.12                          | 0.18                          | 0.28                          | 0.19                          | 0.22                          |                               |
| Chrysene                                  | 120                               | 0.27                         | 0.21                         | 0.32                         | 0.22                         | 0.66                         | 0.23                         | 1                            | 0.19                         | 0.26                         | 0.23                          | 0.34                          | 0.53                          | 0.35                          | 0.47                          | 0.53                          |                               |
| Dibenzo[a,h]anthracene                    | 13                                | ND                           | ND                           | ND                           | ND                           | 0.13                         | ND                           | 0.19                         | ND                           | ND                           | ND                            | ND                            | ND                            | ND                            | 0.094                         | 0.1                           |                               |
| Fluoranthene                              | 100                               | 0.61                         | 0.43                         | 0.69                         | 0.45                         | 1.4                          | 0.43                         | 2.3                          | 0.42                         | 0.61                         | 0.56                          | 0.51                          | 0.73                          | 1.2                           | 0.76                          | 0.97                          |                               |
| Fluorene                                  | 100                               | ND                           | ND                           | ND                           | ND                           | 0.091                        | ND                           | ND                           | ND                           | ND                           | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Indeno[1,2,3-cd]pyrene                    | 39                                | 0.13                         | 0.12                         | 0.2                          | 0.12                         | 0.38                         | 0.12                         | 0.57                         | 0.1                          | 0.15                         | 0.15                          | 0.12                          | 0.19                          | 0.31                          | 0.22                          | 0.28                          |                               |
| Naphthalene                               | 100                               | ND                            | ND                            | ND                            | ND                            | ND                            | ND                            |                               |
| Phenanthrene                              | 480                               | 0.43                         | 0.32                         | 0.44                         | 0.34                         | 0.92                         | 0.21                         | 1.5                          | 0.23                         | 0.35                         | 0.33                          | 0.32                          | 0.42                          | 0.67                          | 0.49                          | 0.61                          |                               |
| Pyrene                                    | 100                               | 0.48                         | 0.4                          | 0.68                         | 0.45                         | 1.3                          | 0.41                         | 2.2                          | 0.35                         | 0.53                         | 0.49                          | 0.48                          | 0.68                          | 1.1                           | 0.75                          | 0.96                          |                               |

| Sample ID<br>Sampling Date<br>Sample Type | Site Specific Acceptance Criteria | P2-S1<br>3/16/2010 Composite | P2-S2<br>3/16/2010 Composite | P2-S3<br>3/16/2010 Composite | P2-S4<br>3/16/2010 Composite | P2-S5<br>3/16/2010 Composite | P2-S6<br>3/16/2010 Composite | P2-S7<br>3/16/2010 Composite | P2-S8<br>3/16/2010 Composite | P2-S9<br>3/16/2010 Composite | P2-S10<br>3/16/2010 Composite | P2-S11<br>3/16/2010 Composite | P2-S12<br>3/16/2010 Composite | P2-S13<br>3/16/2010 Composite | P2-S14<br>3/16/2010 Composite |
|---|-----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>PCBs (ppm)</b>                         |                                   |                              |                              |                              |                              |                              |                              |                              |                              |                              |                               |                               |                               |                               |                               |
| Aroclor (Total)                           | 2                                 | 0.047                        | ND                           | ND                           | ND                           | 0.054                        | ND                           | ND                           | ND                           | ND                           | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1016                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1221                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1232                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1242                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1248                              | 2                                 | 0.047                        | ND                           | ND                           | ND                           | 0.054                        | ND                           | ND                           | ND                           | ND                           | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1254                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1260                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1262                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| Aroclor-1268                              | 2                                 | ND                            | ND                            | ND                            | ND                            | ND                            |
| <b>PAH's (ppm)</b>                        |                                   |                              |                              |                              |                              |                              |                              |                              |                              |                              |                               |                               |                               |                               |                               |
| Acenaphthene                              | 100                               | ND                           | 0.24                         | 0.27                         | 0.12                         | ND                           | ND                           | ND                           | ND                           | ND                           | ND                            | ND                            | ND                            | ND                            | 0.083                         |
| Acenaphthylene                            | 8.6                               | ND                           | ND                           | 0.59                         | 0.31                         | 0.18                         | 0.39                         | 0.33                         | 0.25                         | ND                           | 0.12                          | 0.078                         | ND                            | ND                            | ND                            |
| Anthracene                                | 100                               | ND                           | 0.61                         | 0.59                         | 0.94                         | 0.6                          | 1.1                          | 0.9                          | 0.86                         | 0.47                         | 0.21                          | 0.45                          | 0.29                          | 0.39                          | 0.51                          |
| Benzo[a]anthracene                        | 120                               | 0.53                         | 1                            | 1.3                          | 0.94                         | 0.53                         | 1                            | 0.76                         | 0.74                         | 0.42                         | 0.18                          | 0.4                           | 0.27                          | 0.33                          | 0.44                          |
| Benzo[a]pyrene                            | 71                                | 0.46                         | 0.82                         | 1                            | 0.84                         | 0.53                         | 1                            | 0.76                         | 0.74                         | 0.42                         | 0.18                          | 0.4                           | 0.27                          | 0.33                          | 0.44                          |
| Benzo[b]fluoranthene                      | 50</td                            |                              |                              |                              |                              |                              |                              |                              |                              |                              |                               |                               |                               |                               |                               |

**Newark Brick Tower - Residential Tower Demolition  
Processed Backfill Material**

**Table B-4 - Summary of Analytical Results for PP Metals,  
Pesticides, Cyanide and Phenols**

| <b>Sample ID</b>        | <b>Site Specific Acceptance Criteria</b> | <b>P1-S2<br/>3/16/2010<br/>Composite</b> | <b>P1-S9<br/>3/16/2010<br/>Composite</b> | <b>P1-S10<br/>3/16/2010<br/>Composite</b> | <b>P1-S13<br/>3/16/2010<br/>Composite</b> | <b>P2-S4<br/>3/16/2010<br/>Composite</b> | <b>P2-S7<br/>3/16/2010<br/>Composite</b> |
|-------------------------|--|--|--|---|---|--|--|
| <b>PP Metals (ppm)</b>  |  |  |  |   |   |  |  |
| Antimony                | <b>353</b>                               | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Arsenic                 | <b>178</b>                               | 4.7                                      | 6.1                                      | 6   | 12  | 8.4                                      | 4.1                                      |
| Barium                  | <b>17,400</b>                            | 110                                      | 180                                      | 160                                       | 370                                       | 190                                      | 130                                      |
| Beryllium               | <b>16.2</b>                              | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Cadmium                 | <b>51.4</b>                              | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Chromium                | <b>247</b>                               | 11                                       | 12                                       | 13  | 15  | 13                                       | 13                                       |
| Copper                  | <b>1,500</b>                             | 24                                       | 38                                       | 42  | 50  | 37                                       | 35                                       |
| Lead                    | <b>1,000</b>                             | 44                                       | 84                                       | 84  | 120                                       | 90                                       | 90                                       |
| Nickel                  | <b>1,170</b>                             | 8.9                                      | 9.2                                      | 9.6                                       | 11  | 11                                       | 13                                       |
| Selenium                | <b>11.7</b>                              | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Silver                  | <b>95</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Thallium                | <b>1.8</b>                               | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Zinc                    | <b>1,500</b>                             | 170                                      | 280                                      | 300                                       | 390                                       | 310                                      | 200                                      |
| Mercury                 | <b>0.85</b>                              | 0.19                                     | 0.58                                     | 0.36                                      | 0.39                                      | 0.67                                     | 1  |
| <b>Pesticides (ppm)</b> |  |  |  |   |   |  |  |
| Aldrin                  | <b>0.17*</b>                             | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Alpha-BHC               | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| beta-BHC                | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Chlordane               | <b>0.2*</b>                              | 0.074                                    | 0.037                                    | 0.038                                     | 0.049                                     | 0.057                                    | 0.069                                    |
| delta-BHC               | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Dieldrin                | <b>0.18*</b>                             | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Endosulfan I            | <b>50*</b>                               | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Endosulfan II           | <b>50*</b>                               | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Endosulfan Sulfate      | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Endrin                  | <b>50*</b>                               | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Endrin Aldehyde         | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Endrin Ketone           | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| gamma-BHC               | <b>2.2*</b>                              | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Heptachlor              | <b>0.65*</b>                             | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Heptachlor Epoxide      | <b>NA</b>                                | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| Methoxychlor            | <b>50*</b>                               | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| p,p'-DDD                | <b>12*</b>                               | 0.0031                                   | ND                                       | ND  | ND  | ND                                       | 0.0034                                   |
| p,p'-DDE                | <b>9*</b>                                | 0.0076                                   | 0.012                                    | 0.012                                     | 0.014                                     | 0.011                                    | 0.019                                    |
| p,p'-DDT                | <b>9*</b>                                | 0.0043                                   | 0.0089                                   | 0.013                                     | 0.012                                     | 0.013                                    | 0.039                                    |
| Toxaphene               |  | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| <b>Cyanide</b>          | <b>21,000*</b>                           | ND                                       | ND                                       | ND  | ND  | ND                                       | ND                                       |
| <b>Total Phenolics</b>  | <b>50*</b>                               | ND                                       | 1.6                                      | ND  | ND  | ND                                       | ND                                       |

\* = The lower of the NRDCSCC or IGW

ND = Not Detected

NA = Not Applicable

**Newark Brick Tower - Residential Tower Demolition**  
**Processed Backfill Material**

**Table B-5 - Summary of Analytical Results for VOCs**

| Sample ID<br>Sample Date<br>Sample Type | Site Specific Acceptance Criteria | P1-S2 G 3/16/2010 Grab | P1-S9-G 3/16/2010 Grab | P1-S10-G 3/16/2010 Grab | P1-S13 3/16/2010 Composite | P2-S4-G 3/16/2010 Grab | P2-S7-G 3/16/2010 Grab |
|---|-----------------------------------|------------------------|------------------------|-------------------------|----------------------------|------------------------|------------------------|
| <b>Volatile organic Compounds (ppm)</b> |                                   |                        |                        |                         |                            |                        |                        |
| 1,1,1-Trichloroethane                   | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,1,2,2-Tetrachloroethane               | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,1,2-Trichloroethane                   | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,1-Dichloroethane                      | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,1-Dichloroethene                      | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,2-Dichlorobenzene                     | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,2-Dichloroethane                      | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,2-Dichloropropane                     | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,3-Dichlorobenzene                     | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 1,4-Dichlorobenzene                     | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 2-Butanone                              | 50*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 2-Chloroethylvinylether                 | NA                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 2-Hexanone                              | NA                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| 4-Methyl-2-pentanone                    | 50*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Acetone                                 | 100*                              | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Acrolein                                | NA                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Acrylonitrile                           | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Benzene                                 | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Bromodichloromethane                    | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Bromoform                               | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Bromomethane                            | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Carbon disulfide                        | NA                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Carbon tetrachloride                    | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Chlorobenzene                           | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Chloroethane                            | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Chloroform                              | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Chloromethane                           | 10*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| cis-1,2-Dichloroethene                  | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| cis-1,3-Dichloropropene                 | 5*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Dibromochloromethane                    | 1*                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Ethylbenzene                            | 100*                              | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| m&p-Xylenes                             | 12*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Methylene chloride                      | 1*                                | 0.0094                 | 0.022                  | 0.01                    | 0.01                       | 0.016                  | 0.0074                 |
| o-Xylene                                | 12*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Styrene                                 | 97*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Tetrachloroethene                       | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Toluene                                 | 500*                              | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| trans-1,2-Dichloroethene                | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| trans-1,3-Dichloropropene               | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Trichloroethene                         | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Vinyl chloride                          | ND                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Xylenes (Total)                         | 12*                               | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |
| Total Volatile TIC                      | NA                                | ND                     | ND                     | ND                      | ND                         | ND                     | ND                     |

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